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Title of the Invention: Powder cosmetic

[Claims]

[Claim 1] A powder cosmetic comprising (a) a hydrophobicized silicic anhydride having a surface area of not less than  $60 \text{ m}^2/\text{g}$  and (b) a dispersion obtained by dispersing a capsulated oil phase into an aqueous phase, which is liquefied by friction of an application thereof.

[Claim 2] The powder cosmetic of claim 1 comprising the capsulated oil phase for forming the component (b) in an amount of 0.3 to 10% by weight based on the entire amount of the cosmetic.

[Claim 3] The powder cosmetic of claim 1 or 2, wherein the capsulated oil phase for forming the component (b) comprises at least one kind selected from a perfume and an oil soluble drug compound.

[Claim 4] The powder cosmetic of any one of claims 1 to 3 comprising the component (a) in an amount of 2 to 20% by weight based on the entire amount of the cosmetic.

[0007]

[Problem to Be Solved by the Invention] The present invention is made in consideration of the above described circumstances and has an object to provide a powder cosmetic (dry water) which can incorporate an oily component into the system without powdering treatment, has very superior preparation stability, can obtain a moist feeling and a refreshing feeling with any

squeaky feeling, can obtain an extremely good feeling of use and finish, enables incorporation of various oily components over a broad range, thereby can freely adjust usability, effectively maintains active ingredients of particularly a perfume, an oil soluble drug component and the like, when incorporated therein, over a long period of time until friction of an application thereof and fully exhibits the function of each component in use.

[0024] The semi-synthetic water soluble polymer includes, for example, starch type water soluble polymers such as carboxymethyl starch and methylhydroxypropyl starch; cellulose type water soluble polymers such as methylcellulose, nitrocellulose, ethylcellulose, methylhydroxypropylcellulose, hydroxyethylcellulose, cellulose sodium sulfate, hydroxylpropylcellulose, carboxymethylcellulose sodium (CMC), crystalline cellulose and a cellulose powder; and alginic acid type water soluble polymers such as sodium alginate and alginic acid propylene glycol ester.

[0067] (Examples 1 to 3 and Comparative Examples 1 to 3)

Powder cosmetics were prepared with the use of the compositions shown in Table 3 below. The usability (squeaky feeling, moist feeling, refreshing feeling and smooth feeling) and the preparation stability (long-term stability) of the powder cosmetics obtained in Examples 1 to 3 and Comparative Examples 1 to 3 were evaluated. Further, the capsule dispersion (phase A)<sup>(\*)</sup> and the capsule dispersion (phase B)<sup>(\*\*)</sup> in Table 3 are dispersions composed of an oil phase/capsules (hardened gelatin)/aqueous phase having a composition shown in Tables 1 and 2, respectively. And, as the dimethylsilicone oil treated silicic anhydride<sup>(\*\*\*)</sup>, "Aerosil RY200S" (a product of Nippon Aerosil Co., Ltd., surface area: 80 m<sup>2</sup>/g) was used. The results are shown in Table 3.

[0068]

Table 1

Capsule Dispersion (Phase A) (% by weight)	
(1) Ion Exchanged water	the balance
(2) 1,3-Butylene glycol	20.00
(3) Squalane	2.00
(4) Perfume	appropriate amount
(5) Hardened gelatin	0.10
(6) Antiseptic	appropriate amount

[0069] (Preparation Method)

By the coacervation method, a dispersion (capsule dispersion, phase A) composed of oil phase/capsules (hardened gelatin)/aqueous phase was obtained by dispersing, into aqueous phase, capsules containing an oil phase in which a perfume was dissolved in squalane.

[0070]

Table 2

Capsule Dispersion (Phase B) (% by weight)	
(1) Ion exchange water	the balance
(2) 1,3-Butylene glycol	10.00
(3) Dynamite glycerin	5.00
(4) Decamethylcyclopentasiloxane	2.00
(5) $\beta$ -Glycyrrhizic acid	appropriate amount
(6) Hardened gelatin	0.10
(7) Antiseptic	appropriate amount

[0071] (Preparation Method)

By the coacervation method, a dispersion (capsule dispersion, phase B) composed of oil phase/capsules (hardened gelatin)/aqueous phase was obtained by dispersing, into aqueous phase, capsules containing an oil phase in which  $\beta$ -glycyrrhizic acid was dissolved in decamethylcyclopentasiloxane by the coacervation method.

[0072]

Table 3

	Example 1	Example 2	Example 3	Comparative Example 1	Comparative Example 2	Comparative Example 3
(1) Capsule dispersion (Phase A)(*)	25.00	15.00	5.00	25.00	15.00	5.00
(2) Capsule dispersion (Phase B) (**)	5.00	15.00	25.00	5.00	15.00	25.00
(3) 1,3-Butylene glycol	10.00	10.00	10.00	10.00	10.00	10.00
(4) Citric acid	0.05	0.05	0.05	0.05	0.05	0.05
(5) Sodium citrate	0.05	0.05	0.05	0.05	0.05	0.05
(6) Antiseptic	0.20	0.20	0.20	0.20	0.20	0.20
(7) Purified water	balance	balance	balance	balance	balance	balance
(8) L-ascorbic acid- 2-glycoside	1.00	1.00	1.00	1.00	1.00	1.00
(9) Potassium hydroxide	0.03	0.03	0.03	0.03	0.03	0.03
(10) Trehalose	1.00	1.00	1.00	1.00	1.00	1.00
(11) Dimethylsilicone oil treated silicic anhydride(***)	5.00	5.00	5.00	5.00	5.00	5.00
(12) Squalane	-	-	-	0.20	0.20	0.20
(13) Decamethylcyclo- pentasiloxane	-	-	-	0.20	0.20	0.20
(14) Behenic acid	-	-	-	0.02	0.02	0.02
(15) Stearic acid	-	-	-	0.02	0.02	0.02
(16) behenyl alcohol	-	-	-	0.04	0.04	0.04
(17) Stearyl alcohol	-	-	-	0.01	0.01	0.01

Table 3 (-continued)

		Example 1	Example 2	Example 3	Comparative Example 1	Comparative Example 2	Comparative Example 3
Evaluation of Usability	Squeaky feeling	◎	◎	◎	◎	◎	◎
	Moist feeling	◎	○	△	◎	○	△
	Refreshing feeling	◎	◎	◎	◎	◎	◎
	Smooth feeling	△	○	◎	△	○	◎
Preparation Stability Test	0° C Storage	○	○	○	×	×	×
	Room Temperature Storage	◎	◎	◎	△	△	△
	40° C Storage	○	○	○	×	×	×
	Light Exposure Conditions	○	○	○	×	×	×

## [0073] (Preparation Method)

In Examples 1 to 3, (3) to (10) were mixed and dissolved, and thereafter (1) and (2) were dispersed in the resulting solution. The obtained dispersion was mixed with (11) and agitated to prepare a powder cosmetic which was then filled in a container.

[0074] In Comparative Examples 1 to 3, (3) to (10) were mixed and dissolved, and thereafter (1) and (2) were dispersed in the resulting solution (aqueous phase). On the other hand, separately, (12) to (17) were mixed and dissolved (oil phase). Next, an O/W type emulsion was prepared while slowly adding the aqueous phase to this oil phase. The obtained emulsion was mixed with (11) and agitated to prepare a powder cosmetic which was then filled in a container.

[0075] As is clear from the results in Table 3, the powder

cosmetics of Examples 1 to 3 and Comparative Examples 1 to 3 all had good usability and could freely adjust the usability by varying the compounding amounts of the capsule dispersions phase A and phase B and furthermore, it has been found that the powder cosmetics of Examples 1 to 3 had excellent storage stability in addition to the above described usability and hardly changed the preparation form after 6 months under each storage condition to extremely excel in the preparation stability with time compared to Comparative Examples 1 to 3.